Region 3 Trinity Flood Planning Group Meeting
Thursday, February 26, 2026
10:00 a.m.

The Region 3 Trinity Flood Planning Group (R3TRFPG) will hold a public meeting in-person pursuant to Texas Government Code, Section 551.127. This meeting will be conducted in a hybrid format.

In-person:
City of Huntsville
448 State Hwy 75 N
Huntsville, TX 77320

Virtually:
Via WebEx videoconference at:
https://trinityra.webex.com/trinityra/j.php?MTID=macb055867d14b000867b129fac7a61ae
Webinar number: 2490 152 6989

or via phone at 1-408-418-9388
Webinar password: Trinity (249 015 26989 when dialing from a phone or video system)

Members of the public may attend, participate and/or address the RFPG in-person, or they may virtually access the meeting using the videoconference link or teleconference information provided above. Members of the public wishing to address the Trinity RFPG during the meeting are encouraged to follow the registration and comment procedures found below.

MEETING AGENDA

1. Call to order
2. Roll call
3. * Approval of minutes from the previous meeting
4. Acknowledgement of written public comments received
5. Receive registered public comments on specific agenda items – limit 3 minutes per person
6. TWDB Update

7. Update from Region 3 Technical Consultant
   a. Chapter 3 update
      i. Task 3A Floodplain Management Practices
         - *Consider approving Draft Chapter 3, Section 3A (Floodplain Management Practices)
   b. Chapter 5 updates
      i. Definition of "small and rural"
         - *Consider approving RFPG definition of "small and rural"
      ii. Task 5B List of FMEs for TWDB to Perform
         - *Consider approving ranked list of FMEs for TWDB to perform
   c. Chapter 4 updates
      i. Task 4B Technical Memorandum
      ii. Task 4C Performance of FMEs
         - *Consider approving ranked list of FMEs for RFPG to perform
      iii. Task 4A Potentially Feasible FMEs, FMPs and FMSs
         - *Consider approving approach to recommend FMXs from potentially feasible
   d. Task 8 updates
   e. Task 10 Outreach updates
   f. Project schedule
8. TWDB Presentation on Nature-Based Solutions
9. Updates from liaisons for adjoining coastal regions
   a. Region 5 Neches RFPG
   b. Region 6 San Jacinto RFPG
10. Updates from Planning Group Sponsor
11. Receive registered general public comments – limit 3 minutes per person
12. Announcements
13. Confirm meeting date for next meeting(s)
14. Adjourn

** Denotes Action Item*

ORAL PUBLIC COMMENTS

If you wish to provide oral public comments at the meeting, you are encouraged to register in advance by emailing info@trinityrfpg.org no later than 9:00 a.m. on February 26, 2026, providing your name, phone number, email address and who are you representing, and indicating if you wish to comment on a specific agenda item or provide general comments. During the meeting, those who have registered to speak, either in-person or virtually, will be called upon by the Chair during the appropriate comment period. At the discretion of the Chair, unregistered attendees who wish to speak may also have the opportunity to provide oral comments during the public comment periods of the agenda.

- Those participating by videoconference will be asked to use the "raise hand" function, visible by hovering the cursor over the attendee's name onscreen, to indicate their interest in speaking during the appropriate public comment period.
- Those participating by teleconference will be asked to enter *3to indicate their interest in speaking and to be placed into the queue in order to be called upon during the appropriate public comment period.

WRITTEN PUBLIC COMMENTS

If you wish to provide written comments prior to or after the meeting, please email your comments to info@trinityrfpg.org and include "Region 3 Trinity Flood Planning Group Meeting" in the subject line of the email.

Additional information may be obtained from:

Alexis Long at: (817) 467-4343 or by email at: longas@trinityra.org
Physical location: 5300 South Collins Street, Arlington, TX 76018

REGION 3 TRINITY
REGIONAL FLOOD PLANNING GROUP

February 26, 2026

1. Call to order

2. Roll call

3. Approval of minutes

Region 3 Trinity Flood Planning Group Meeting
Tuesday, December 9, 2025
1:00 p.m.

The Region 3 Trinity Flood Planning Group convened a public meeting, in person as well as virtual, on Tuesday, December 9, 2025, 1:00 p.m.

Chairman Glenn Clingenpeel opened the meeting at 1:05 p.m.

Voting Members Present:

Melissa Bookhout
Glenn Clingenpeel
Scott Harris, absent
Sean Howard, joined after roll call
Andrew Isbell, absent
Jordan Macha, absent
Rachel Ickert
Galen Roberts
Matt Robinson
Lissa Shepard
Sarah Standifer, joined after roll call

8 voting members were present at the time of roll call, constituting a quorum.

Ex Officio Members Present:

Susan Alvarez
Steve Bednarz
John Blount, absent
Justin Bower
Todd Burrer
Humberto (Bert) Galvan
Diane Howe, absent
Lonnie Hunt, absent
Risa King, absent
Neely Kirkland
Manuel Martinez, absent
Katie Koslan
Ashley Thomas, alternate for Andrea Sanders
Matthew Lepinski, absent
Lisa McCracken
Greg Waller
Adam Whisenant
Amanda Young, absent

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Approval of the Minutes for the October 3, 2025, Meeting

Motion: Matt Robinson moved to approve the minutes as presented; Second: Lissa Shepard; Action: Minutes were unanimously approved.

Acknowledgement of written public comments received

No written public comments were received.

Receive registered public comments on specific agenda items

Cheryl Boggs Savage introduced herself as a Board Member of the Westwood Shores Community at Lake Livingston and noted that she was also a resident of the community. That was the extent of her comments.

TWDB Update – Katie Koslan, TWDB

Katie Koslan provided an update on behalf of TWDB. There was limited new information to report since the previous meeting. It was noted that the Technical Memorandum was due on January 7, 2026, and that a seven-day public notice was required prior to the meeting at which acceptance of the Technical Memorandum would be considered for approval by the R3RFPG. The TWDB had made adjustments to the Technical Memorandum checklist in response to issues identified by other regions, including the addition of Exhibit C Tables 12, 13, and 14. A Chair-Led conference call was held on December 3, 2025, to discuss regional approaches to Task 5B, and the recording and presentation materials were posted on the TWDB's website. Additionally, a newsletter summarizing flood planning updates from August through November was distributed on November 18, 2025.

Update from the Nominating Committee – Scott Harris, Gulf Coast Authority

No update was provided.

Updates from Region 3 Technical Consultant – Stephanie Griffin, Halff

Stephanie Griffin, Halff, provided an overview of the progress on multiple chapters of the regional flood plan. Draft Chapter 2 had been prepared and was ready for R3RFPG approval. Draft Chapter 3 was also ready for approval, with several section updates to be presented prior to requesting approval. Chapter 4 included several updates that were presented for discussion. It was noted that the Technical Memorandum was due to the TWDB on January 7, 2026. Chapter 8, which contained a running list of items for potential consideration as proposed improvements for the third cycle of regional flood planning, was also reviewed. Additionally, public outreach activities and the project schedule were identified as topics for discussion during the meeting.

a. * Consider Approving Draft Chapter 2 (Existing and Future Flood Risk) – Stephanie Griffin, Halff

It was reported that there was no new or substantially different information to present for Chapter 2, as it had been discussed over several meetings. The existing conditions and future conditions sections were finalized. The Chapter had gone through the public comment process, during which a small number of editorial comments were received and addressed. As a result, Draft Chapter 2 was complete and ready for approval.

The Technical Consultants recommended that the motion to approve Chapter 2 include flexibility to make non-substantive changes to the chapter as necessary to meet the requirements of the work plan and the onboard contract.

Chairman Glenn Clingenpeel called for a motion to approve Draft Chapter 2 as presented, to include flexibility to make non-substantive changes before inclusion in the 2028 Flood Plan

Motion: Rachel Ickert moved to approve Draft Chapter 2 as presented, to include flexibility to make non-substantive changes before inclusion in the 2028 Flood Plan;
Second: Matt Robinson; Action: Motion was unanimously approved.

b. Chapter 3 Updates

i. * Task 3A Floodplain Management Practices – Shena Providence, FNI

Ms. Providence stated the six Floodplain Management Practices and noted that the R3RFPG had been discussing the adoption or recommendation of consistent minimum standards across the region over several meetings. For background, it was explained that the concept was initially introduced in August 2025 and was discussed in greater detail during the October 2025 meeting, when the R3RFPG considered whether to adopt or recommend the standards on a regional basis.

It was reiterated that adopting the standards would make them a requirement, which would limit which entities could submit certain FMXs and would impose an additional requirement on project sponsors. In contrast, recommending the standards would be consistent with the approach used in Cycle One, allowing any entity to submit FMXs while keeping the standards advisory. It was also clarified that recommended standards could be stated generally, whereas adopted standards would require specific, prescriptive language that could be followed verbatim.

It was explained that if the R3RFPG chose to adopt, rather than recommend, any of the floodplain management practices, the Technical Consultant Team would recommend requiring only the first two practices.

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This recommendation was based on the fact that participation in the NFIP is ultimately required to obtain FIF funding for FMXs. It was noted, however, that NFIP participation is limited to cities and counties that meet population requirements, which could exclude townships or small towns from submitting FMXs and may therefore present a limitation. Statistically, it was estimated that 12% of the region might be excluded, as approximately 88% of the region is currently participating in the NFIP.

Lissa Shepard, Dallas County, proposed that the first and second floodplain management practices be requirements, noting that they were closely related in her view. She emphasized that the first item was particularly significant to the TWDB. She concluded that, in her opinion, requiring these practices was important for maintaining eligibility for future funding.

Glenn Clingenpeel asked Katie Koslan to determine whether participation in the NFIP was required to be eligible for FIF funding, and if so, whether entities would still be considered eligible by the TWDB if they adopted standards separate from NFIP that were equivalent to NFIP.

Katie Koslan responded via comment in the chat function of the video conference that: “While floodplain management ordinances and regulations may vary significantly between communities, especially those that may have higher standards, the TWDB is simply verifying that the NFIP minimum standard is in place and primarily relying on the signed certification that active enforcement is occurring. Within Texas there are approximately 1,400 cities and counties and of those about 1,200 participate in the NFIP and thus have NFIP standards in place. Verification of NFIP-participating communities should be straightforward. Of the remaining 200 that do not participate in the NFIP, they may or may not have floodplain management standards in place. For those, TWDB will review the ordinances and regulations provided to assess if they are comparable to NFIP minimum requirements”.

David Rivera, FNI, commented that if an entity was not participating in the NFIP, the application would need to include a statement committing to make an effort to become an NFIP member, which applies only to cities and counties. He noted that the eligibility of other types of entities was not addressed. He further stated that entities with equivalent standards should be able to apply for funding, but clarification from the TWBD would be required.

Rachel Ickert, TRWD, asked whether the region wanted to be in a position of implementing requirements that exceed what the TWDB mandates. She noted that this was primarily a question of principle and policy and observed that similar situations were currently occurring in the water planning sector, where regions were implementing measures beyond TWDB requirements. Rachel cautioned the R3RFPG that there could be

unintended consequences and identified this concern as her only hesitation.

Matt Robinson, BGE, stated that he supported the first and second floodplain management practices. Drawing from his development background, he suggested keeping the standards flexible to allow other semi-governmental entities the option to participate, provided they meet equivalent standards. He expressed hesitation regarding the fifth practice (Land use standards to reduce future flood risk.), noting that it could lead to unintended consequences potentially unfavorable to landowners. Overall, he indicated support for practices one and two.

Rachel Ickert, TRWD, asked what benefit the R3RFPG would gain by implementing requirements that exceeded those already established by the TWDB for all regions.

Glenn Clingenpeel responded that the benefit would be inherent in the practice being considered, as it provides the associated advantages of that particular practice. He noted that implementing additional requirements would give the group flexibility in how the flood planning process is carried out within the region. Specifically, it would allow the R3RFPG to encourage participation through incentives or guidance, though he clarified that this statement was not an endorsement of any particular practice.

Rachel Ickert, TRWD, stated that she was not opposed to the idea of additional requirements but expressed concern that it might position the R3RFPG as a regulatory body, which may not align with its intended role. She further noted that the TWDB already encourages, and in some cases quasi-requires, certain standards when entities submit applications for funding.

Glenn Clingenpeel stated that if there was no further discussion, the R3RFPG could entertain a motion on whether to adopt any or all of the proposed practices or, as done previously, carry them forward as recommendations.

The R3RFPG agreed to table the decision to allow time to obtain additional information, articulate the issues with greater specificity, and include relevant numerical details. The discussion will be revisited at a later meeting when the R3RFPG is better prepared to deliberate. It was noted that any future changes would not impact the submission of the Technical Memorandum.

ii. Task 3B Mitigation Needs Analysis (example scoring) - Julie Jones, Nathan D. Maier

Ms. Jones shared that a review was conducted of the various scoring criteria. Statistical data from all basins were analyzed, median values were

calculated, and these were assigned to the mid-range score, with lower and higher scores adjusted proportionately to reflect relative conditions. The scoring framework from the previous cycle was used as the base file and was amended as needed to reflect current conditions, as some criteria required updates.

The R3RFPG previously approved scoring was reviewed, along with examples demonstrating how results from one HUC-12 across five basins would be applied, including fragmented HUC-12s. Significant effort was undertaken by the Technical Consultants to complete this work.

Flood risk knowledge gaps at the HUC-12 level were discussed, noting substantial uncertainties. It was indicated that completion of comprehensive flood mapping would significantly reduce these uncertainties.

iii. * Consider approving Draft Chapter 3 (Floodplain Management Practices, Flood Mitigation Needs Analysis, and Flood Protection Goals)

The R3RFPG agreed to retain Chapter 3 in draft form, as the Task 3A floodplain management practice was tabled for discussion during the meeting.
Chairman Glenn Clingenpeel called for a motion to approve Draft Chapter 3, sections 3B and 3C and revisit 3A at a later date.

Motion: Matt Robinson moved to approve Draft Chapter 3, sections 3B and 3C and revisit 3A at a later date;
Second: Lissa Shepard; Action: Motion passed unanimously

c. Chapter 4 Updates – Audrey Geisler-Klump, Halff

i. Task 4A Potentially Feasible FMEs, FMPs and FMSs

Audrey Geisler-Klump, Halff, presented that a total of 139 actions were discussed between the Technical Consultant Team and potential sponsors. From those discussions, 126 actions were formally submitted for the R3RFPG's consideration. Based on the current review, three FMPs were downgraded to FMEs. As reflected in the adjusted figures shown in the pie chart, 27 FMSs remained. At this stage, the R3RFPG proceeded with 43 FMPs and 56 FMEs.

In all three downgraded cases, the projects were not supported by a hydraulic model capable of demonstrating compliance with the TWDB's no negative impact requirement. Consequently, these projects were moved into an evaluation phase to develop the necessary models, with the intent that they could later be resubmitted as FMPs once sufficient supporting information is available.

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It was clarified that one FME and one FMP were combined into a single FMP. Additionally, two FMEs were consolidated into one or two existing FMPs, as appropriate. These combinations were made because the projects were substantively the same.

Task 4A was not expected to be substantially complete for the Technical Memorandum and therefore represented a snapshot in time. The figures presented, including the stated adjustments, reflected the numbers that would be carried forward for the Technical Memorandum submittal. Tables 12, 13, and 14 included in the Technical Memorandum packet reflecting the status as of November 21, 2025 and did not incorporate information received the previous day. Accordingly, adjustments to those tables would be required in the packet, specifically moving the affected FMPs from Table 13 to Table 12 so that the same information is presented in a different table to meet TWDB requirements.

On January 7, 2026 the potentially feasible FMXs lists would be submitted as part of the Technical Memorandum to the TWDB, with the understanding that these lists may change as the recommendations process and other required actions or evaluations progress.

By January 2026, FME scoring should be completed, and a ranked list of FMEs presented to the Technical Subcommittee. This will follow the process previously recommended by the Technical Subcommittee and approved by the R3RFPG to identify FMEs to be promoted to FMPs through Task 4C, and that process would continue as planned.

On January 20, 2026 the R3RFPG Technical Subcommittee will meet to review the scored and ranked FMEs, finalize the list of FMEs to advance to FMPs, and determine how they would be submitted to R3RFPG and the TWDB.

ii. * Consider Approving Technical Memorandum (Task 4B) for Submittal to TWDB – Stephanie Griffin, Halff

Stephanie Griffin, Halff, shared that the Technical Memorandum represents a snapshot in time, intended to demonstrate to the TWDB that the R3RFPG's plan is progressing and that the scope of work is being addressed. It is understood that adjustments, refinements, corrections, and reorganization can continue after the submittal, as this document primarily serves to show progress. The submittal requires extensive documentation, and a draft Technical Memorandum was submitted last week. Additionally, the R3RFPG will need to include draft meeting minutes from today's meeting which will be incorporated into the package sent to the TWDB.

Chairman Glenn Clingenpeel called for a motion to approve the Technical Memorandum for submittal to TWDB with appropriate attachments.

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Motion: Sarah Standifer moved to approve the Technical Memorandum for submittal to TWDB with appropriate attachments;
Second: Lissa Shepard; Action: Motion passed unanimously.

iii. Task 4C Performance of FMEs – Audrey Geisler-Klump, Halff

Audrey Geisler-Klump, Halff, stated that following R3RFPG consideration, the Technical Consultant Team would initiate Task 4C, under which the selected FMEs would be advanced to FMPs based on the approved list. By March 26, 2026 and in advance of that deadline per the proposed schedule, the list of FMEs to be handled by the TWDB would be submitted, along with other required supporting materials.

d. Task 8 Updates – Stephanie Griffin, Halff

Stephanie Griffin, Halff introduced Chapter 8 as a “parking lot” of ideas intended to inform improvements in future cycles of regional flood planning, consistent with the approach used during the first planning cycle. The chapter organized potential recommendations into four categories: administrative and regulatory, funding opportunities, legislative considerations, and an “other” category for additional items.

Several initial items were discussed. The Technical Consultants recommended that the TWDB re-evaluate the formula used to allocate funding across regions for the third planning cycle, with consideration given to factors such as data availability, regional acreage, and population. It was noted that Region 3, despite its large geographic size and number of counties, experienced a reduction in funding from the first to the second cycle while other regions received increases, creating funding constraints and implementation challenges.

The Technical Consultants also recommended that Exhibits C and D be released concurrently with the scope of work during the contracting phase to provide more complete information for sponsors during contract development. Additional items included the need for clearer documentation in Exhibit C regarding floodplain management practices and the recognition of FMXs implemented outside the regional flood planning process or the Flood Infrastructure Fund.

Discussion further highlighted concerns regarding funding accessibility for smaller and rural communities, particularly related to local match requirements and administrative capacity. Examples were cited where communities declined funding opportunities, including early flood warning systems, due to an inability to meet match requirements or manage grant administration. The group noted that the complexity, timing, and length of the overall planning and funding process may present barriers to effective implementation and disproportionately impact smaller communities.

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Potential opportunities to improve accessibility, streamline processes, and provide development or grant assistance, possibly through regional entities or councils of governments, were identified for further consideration. The discussion concluded with the understanding that Chapter 8 would remain a living record of issues and recommendations, with additional input to be incorporated and refined as the chapter is formally developed.

e. Task 10 Outreach Updates – Dorothy White, Cooksey Communications

Dorothy White, Cooksey Communications, provided an update. Ongoing stakeholder outreach activities were conducted, including updates to the stakeholder contact list, distribution of notifications regarding the availability of Draft Chapters 2 and 3 and the Technical Memorandum, and the posting of meeting agendas and materials on the project website.

In response to a request made at the October R3RFPG meeting, a general public education presentation was developed. A OneDrive link to the presentation was to be distributed following the meeting, with members encouraged to download and customize their own copies. The presentation was designed to be adaptable, including optional slides and a placeholder slide for highlighting local accomplishments from the first planning cycle. Feedback and suggested revisions were to be submitted via the project email address for incorporation into updated versions.

Technical Consultant support was offered to assist members in tailoring the presentation and providing additional information as needed. Media outreach activities for the meeting included the distribution of media advisories and continued maintenance of media contact lists. The project website and social media platforms were kept current with draft postings and meeting materials, and growth and engagement of the project's LinkedIn group continued, with members encouraged to share and engage with posted updates to expand stakeholder awareness and participation.

f. Project Schedule

Stephanie Griffin, Halff, shared that the R3RFPG is on target to meet the Tech Memo deadline of January 7, 2026, and appreciation was expressed for R3RFPG approvals. On January 20, 2026, the R3RFPG Technical Subcommittee will meet to work on the three designated tasks. In February, the R3RPG will convene to consider approval of the lists for submission to the TWDB to advance FMEs to FMPs, as well as the lists for the R3RFPG to advance FMEs to FMPs. Following the February meeting, the R3RFPG will be in a position to transition to a quarterly meeting schedule. March 26, 2026, marks the firm deadline to submit the list of FMEs to the TWDB for evaluation. In addition to the FMEs, several accompanying submittals will also need to be provided by that date.

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Updates from liaisons for adjoining coastal regions

a. Region 5 Neches RFPG: No update was provided
b. Region 6 San Jacinto RFPG: Todd Burrer shared that his region will begin public engagement meetings in January, with a total of five in-person meetings planned for that month.

Update from Planning Group Sponsor – Chairman Glenn Clingenpeel, TRA

The Technical Subcommittee meeting is scheduled for January 20, 2026 at 9:00 a.m. In February, the R3RPG will meet in Huntsville, pending confirmation of the facility.

Receive registered public comments – limit 3 minutes per person

Grace Darling, Arlington Conservation Council, questioned why approximately 12% of the region lacks any plan or access to funding and expressed concern about why these areas are effectively being orphaned. She asked whether anyone is closely monitoring or advocating for those communities.

Glenn Clingenpeel responded that the 12% referenced consists of areas that are outside of the National Flood Insurance Program.

Announcements

There were no general announcements from planning group members.

Confirm meeting date for next meeting

In February, the R3RPG will meet in Huntsville, pending confirmation of a venue.

Adjourn

2:35 PM adjourned

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THE ABOVE AND FOREGOING ARE CERTIFIED TO BE TRUE AND CORRECT MINUTES OF THE REGULAR MEETING OF THE REGION 3 TRINITY FLOOD PLANNING GROUP HELD DECEMBER 9, 2025.

January 5, 2026

HEATHER FIRN, Acting Secretary
REGION 3 TRINITY FLOOD PLANNING GROUP

Date

January 5, 2026

GLENN CLINGENPEEL, Chair
REGION 3 TRINITY FLOOD PLANNING GROUP

Date

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4. Acknowledgement of written comments received

From:	Trinity RFPG
To:	BLACK ENIGMA, LLC
Cc:	Lissa Shepard; Audrey Giesler Klump; Stephanie Griffin; Colby Walton; Dorothy White; Owen Ramsey
Subject:	RE: Region 3 Trinity Flood Planning Group Meeting – Written Public Comment (Sand Branch, Dallas County)
Date:	Thursday, January 8, 2026 2:54:00 PM
Attachments:	image001.png image002.png

Good afternoon, Marion!

Thank you for taking the time to share your comments and information with the Trinity Regional Flood Planning Group. We truly appreciate you reaching out and helping us better understand the concerns of the residents of Sand Branch.

Your comments will be forwarded to the Planning Group and included in the public record for discussion at the next TRFPG meeting on Feb. 26.

In the meantime, one of our Planning Group members, Lissa Shepard, represents Dallas County, and we've copied her here in case you would like to discuss any of the points you raised in greater detail.

Thank you again for your thoughtful submission. The Trinity RFPG values the opportunity to listen to community members who are directly impacted by our flood planning efforts.

Owen Ramsey
Cooksey Communications
C: 614-214-6932

From: BLACK ENIGMA, LLC <m.small@blackenigma.com>
Sent: Monday, December 29, 2025 8:30 AM
To: Trinity RFPG <info@trinityrfpg.org>
Subject: Region 3 Trinity Flood Planning Group Meeting – Written Public Comment (Sand Branch, Dallas County)

To Whom It May Concern,

My name is Marion Small, and I am submitting this email as written public comment for inclusion in the official record of the Region 3 (Trinity) Flood Planning Group.

I am writing on behalf of Juggernaut Relief, Inc., a Texas-based 501(c)(3) nonprofit currently assisting **Sand Branch**, an unincorporated community in Dallas County, Texas, with emergency water access and infrastructure-related needs.

Community Conditions and Floodplain Impacts

Sand Branch residents are experiencing compounding hardships related to floodplain designation and regulatory restrictions, including but not limited to:

- Posted signage and enforcement indicating residents cannot repair, rebuild, or improve homes

- Restrictions that reportedly prevent roof repairs and basic structural improvements

- Limitations that effectively block water system upgrades, sanitation improvements, and resilience measures

Based on community input and observed conditions, these restrictions appear to be tied to *outdated* floodplain or flood zone data, which may no longer accurately reflect current hydrologic conditions or risk.

Resulting Impacts

As a result of these limitations:

- Homes continue to deteriorate due to inability to perform basic maintenance

- Residents face prolonged exposure to health and safety risks

- Access to safe water, sanitation, and emergency preparedness resources is constrained

- Longstanding inequities are reinforced despite prior public investment in the area

Request for Consideration

We respectfully request that the Region 3 (Trinity) Flood Planning Group:

1. Acknowledge and review the conditions impacting Sand Branch as part of regional flood planning considerations

2. Consider whether updated floodplain assessments or studies may be warranted

3. Clarify pathways that would allow communities like Sand Branch to pursue resilient infrastructure improvements while remaining compliant with floodplain

regulations

4. Ensure that unincorporated, underserved communities are not unintentionally excluded from relief or mitigation opportunities due to outdated data or administrative barriers

Our intent is to participate constructively in the regional planning process and to ensure that documented community conditions are accurately reflected in planning discussions and future recommendations.

Thank you for the opportunity to submit written public comment and for your continued work on regional flood planning in the Trinity Basin.

Respectfully,

MARION C. SMALL
Founder, CEO
BLACK ENIGMA, LLC
Phone: (972) 815-9383
Email: m.small@blackenigma.com
Website: https://blackenigma.com

"The builder is never loud—the blueprint speaks for him".

5. Public comments on agenda items

6. TWDB update

7. Consultant update

CONSULTANT UPDATE

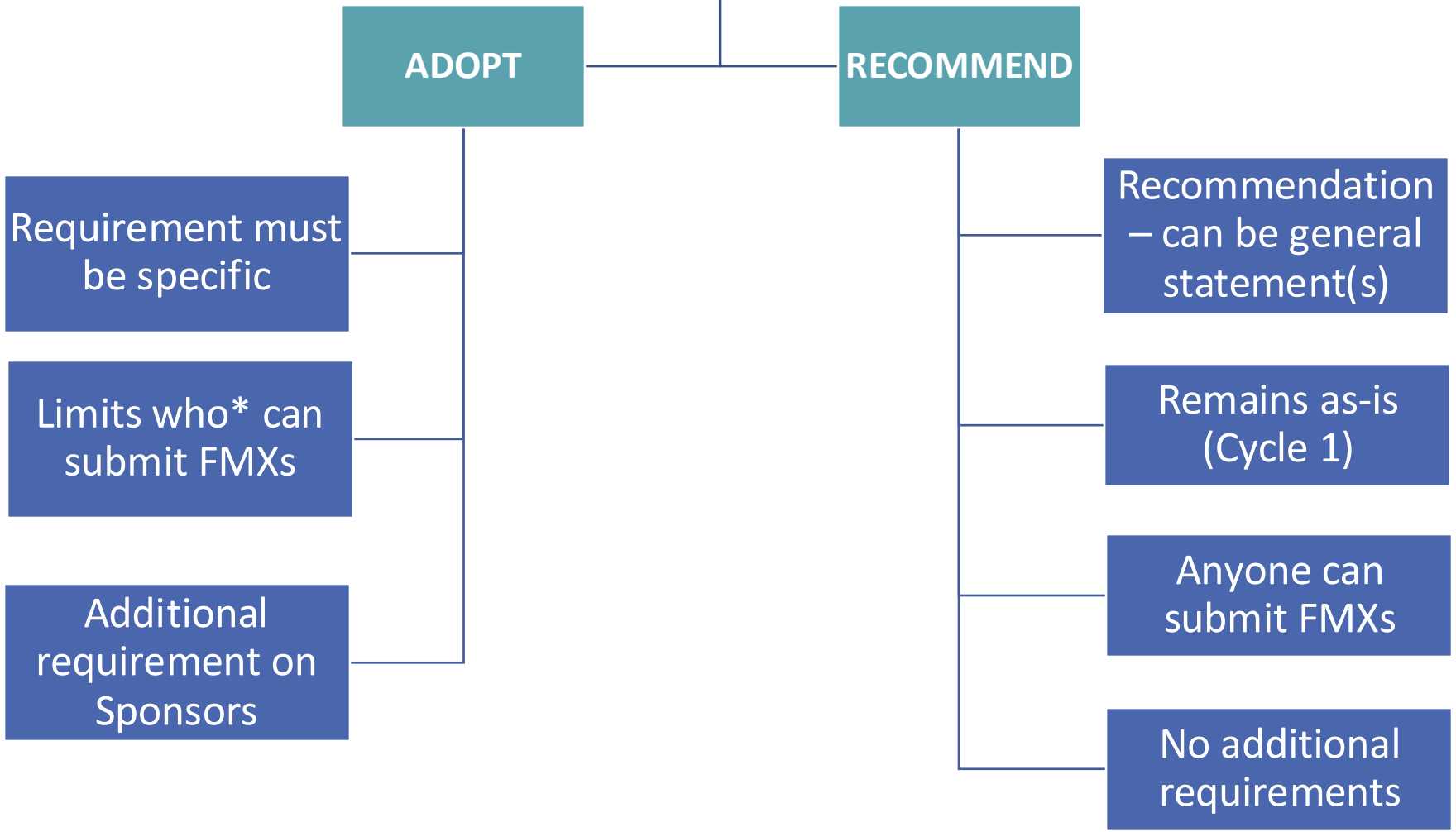
- Chapter 3 Update & Approval
  - * Consider action on minimum standards (3A)
- Chapter 5 Update
  - Update of Task 5B – FMEs for TWDB to perform
  - *Consider action on definition for small/rural communities
  - *Consider action on FME list for TWDB to perform
- Chapter 4 Update & Approval
  - *Consider action on FME list for RFPG to perform
- Public outreach updates
- Project schedule

* Denotes Action Item

Chapter 3

Task 3A Floodplain Management Practices

Does the RFPG Want to **Adopt and/or Recommend** Consistent Minimum Standards Across the Region?



**Entities who currently meet the adopted/required minimum standard*

Floodplain Management Practices Included in Cycle 2*

1. Participate in the NFIP or Adopt Equivalent Standards
2. Regulate development in the FEMA floodplain or other local floodplain designated by local jurisdiction
3. Establish higher standards (more stringent than the NFIP) for development or freeboard above the floodplain
4. Drainage corridor preservation
5. Land use standards to reduce future flood risk
6. Compensatory flood storage

*Please see provided PDF for a more in-depth description for each recommendation**

Suggested Path Forward is to Keep Floodplain Management Practices as Recommendations

- We **preserve broad participation** in the regional planning process
- We **avoid unintended exclusions** of otherwise eligible sponsors
- We **allow communities flexibility** to achieve compliance prior to pursuing funding

*Please see provided PDF for a more in-depth description for each recommendation**

Background:

The Summer 2025 data collection also asked survey participants their opinion on whether the Trinity RFPG should adopt consistent minimum standards across the entire region. The survey question went on to clarify that such a requirement would only allow the Trinity RFPG to consider including flood mitigation solutions for those entities who currently meet the adopted/required minimum standards. Out of the 61 respondents, 59% agreed with potentially adopting (requiring) consistent minimum floodplain management standards across the entire region. ***Table 3.1*** summarizes the participant responses.

Table 3.1: Survey Responses for Potentially Adopting (Requiring) Consistent Minimum Floodplain Management Standards

Description	Number of Responses	Percent
Yes	36	59%
No	10	16%
I don't know	15	25%
Total	**61**	**100%**

Source: Trinity Region data collection survey results as of April 3, 2025

The Trinity RFPG held a public meeting on August 6, 2025 **to consider the question of recommending or adopting (requiring) minimum standards for Cycle 2.** On October 4, 2025, the technical consultants want input from the RFPG to determine whether the Trinity region should **adopt or recommend** the following region-wide floodplain management standards:

1. Participate in the NFIP or adopt equivalent standards
2. Regulate development in the FEMA floodplain or other local floodplain designated by local jurisdiction
3. Establish higher standards (more stringent than the NFIP) for development or freeboard above the floodplain
4. Support drainage corridor preservation
5. Utilize land use standards to reduce future flood risk
6. Consider compensatory flood storage

Please note that floodplain management **recommendations** in the Plan **may be fairly general** (e.g., "The RFPG recommends that communities adopt and enforce specific freeboard requirements") whereas **adopted minimum standards that must be specific** enough for local entities to be able to clearly understand and adopt nearly verbatim (e.g., "Communities must adopt and enforce a minimum of one foot of freeboard for all new residential and non-residential construction and substantially improved or damaged structures in the 1 percent annual chance floodplain as defined by FEMA"). If the RFPG requires them, minimum standards must be adopted by entities for FMEs, FMSs, or FMPs associated with them to be included in the plan

These recommendations will inform recommended strategies (e.g. FMEs and FMSs) for inclusion in the Cycle 2 Regional Flood Plan.

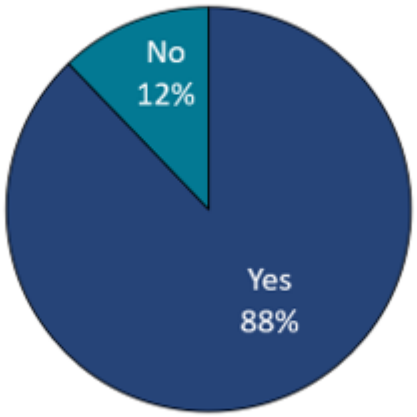
The following descriptions outline in more detail what each of these floodplain management standards could entail:

1. Participate in the NFIP or Adopt Equivalent Standards

Communities that participate in the NFIP are required to have a floodplain ordinance or court order that meets or exceeds the NFIP minimum standards (FEMA Flood Insurance Rules & Regs, 2024). For more detailed information on NFIP minimum standards, please see 44 CFR Part 60.3 Floodplain Management Criteria.

Please note that not all entities with flood responsibilities are eligible to participate in the NFIP program. Only cities and counties are eligible to participate in the NFIP program. Therefore, ***Figure 3.1*** below is limited to cities and counties.

Figure 3.1: Percentage of National Flood Insurance Program Participating Entities in Trinity Region



Source: Source: FEMA CIS Report as of April 1, 2025

2. Regulate development in the FEMA floodplain or other local floodplain designated by local jurisdiction

Floodplain management and land use practices were examined in Cycle 2 by looking at regulations, policies, and trends in the region. The purpose of these management practices is to help with protection of life and property. Floodplain management and land use practices vary from one entity to another. Most communities in the region follow the rules and policies of the Federal Emergency Management Agency (FEMA), which manages the National Flood Insurance Program (NFIP) where the minimum standards for development in and around the floodplain can be found.

Cities and counties have the authority to establish their own policies, standards, and practices to manage land use in and around areas of flood risk. NFIP participating communities have the responsibility and authority to restrict development in SFHA to help protect areas from potential flooding. They can also adopt and enforce

higher standards than the FEMA NFIP minimum standards to further reduce flood risk to people and property. FEMA supports and encourages entities to establish higher standards to reduce flood risk to life and property.

3. Establish higher standards (more stringent than the NFIP) for development or freeboard above the floodplain

According to the TWDB Exhibit C Guidance Document, the term "higher standard" is defined as freeboard, detention requirements, or fill restrictions. FEMA defines freeboard as additional height above the BFE that provides a factor of safety when determining the minimum elevation of the lowest floor. The TFMA performs a Higher Standards Survey every year of cities and counties to document which entities have adopted higher development standards.

The NFIP establishes minimum standards that a city or county must meet to be eligible to participate in the NFIP. For example, the minimum standards require:

- Buildings to be constructed at or above the Base Flood Elevation (BFE)*,
- Provide for floodproofing as an option for non-residential buildings,
- Mandate provisions specific to the elevation and anchoring of manufactured houses (CFR, 1976).

**The BFE is the elevation of the surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. In many cases, minimum standards may be based on maps that were developed with topography, rainfall, and runoff data that is now outdated. Therefore, adopting minimum standards based on these sources may result in protection from flood damage that is less than the NFIP intends.*

Please note that of the entities in the Trinity Region that require freeboard, the majority use the BFE plus two feet for current conditions. Fewer entities have future 1% annual chance storm event condition information; however, many of those entities require two feet of freeboard above the current BFE.

Table 3.1: Summary of Freeboard Requirements for Communities in Trinity Region

Freeboard	Current 1% Annual Chance Storm Event Conditions	Future 1% Annual Chance Storm Event Conditions
At or above current BFE	71	4
BFE + 1 foot	26	9
BFE + 1.5 feet	1	1
BFE + 2 feet	162	42
BFE + 3 feet	10	3
Total	270	59

Source: Trinity Region data collection survey results as of April 3, 2025

The Trinity RFPG supports the use of freeboard in local floodplain ordinances and court orders. Ideally, the Trinity RFPG recommends cities and counties to adopt and enforce a minimum freeboard requirement of one foot above the BFE based on future 1% annual chance storm event conditions, where possible.

4. Drainage corridor preservation

'Drainage corridor preservation' means protecting the natural floodplain and river corridors so they can safely carry and store floodwaters, while limiting development that would increase flood risks for people and property.

In the Upper Basin area of the Trinity Region, communities along the West Fork and Elm Fork of the Trinity River participate in the NCTCOG's Corridor Development Certificate (CDC) program (NCTCOG CDC, 2025). The CDC program is a regional approach to maintain flood capacity within the Trinity River. The CDC flood model includes current conditions and future (year 2055) conditions flood discharges that must be considered for evaluating proposed projects within the Trinity River corridor.

The three primary criteria (NCTCOG Corridor Development Certificate Criteria Manual, 2025) of the CDC program that proposed new development in the corridor must meet are:

- Water surface elevations do not increase for the 1% annual chance storm event flood elevation and no significant increase for the standard project flood elevation
- Valley storage must be maintained in the 1% annual chance storm event floodplain with a maximum loss of 5 percent in the standard project floodplain
- Channel and floodplain velocities cannot be increased

5. Land use standards to reduce future flood risk

Areas without flood maps and models or with outdated maps and models are at greater danger of increased flood risk in terms of future population and property development within the floodplain. Entities need comprehensive and updated maps to support responsible development. Local floodplain regulations with higher standards need to be adopted and enforced to better reduce the flood risk to future population and property.

The Trinity Region encourages those cities and counties without floodplain ordinances or court orders to develop, adopt, implement, and enforce floodplain regulations that at least meet the NFIP minimum standard.

Entities who currently apply future flood conditions as part of their design criteria essentially apply a factor of safety to better protect today's developments from future flood risks.

Cities and counties that implement future land use plans consider areas of anticipated population growth and development within their communities. However, the existing and future floodplains are not necessarily a component in developing the future land use plan. Incorporating the existing and future floodplains will provide cities and counties with additional direction as to where population and development should be directed to avoid flood risk to people and property.

It is challenging to define future floodplains with complete certainty. However, one should anticipate that the future floodplains will be different from existing floodplains in some areas within the region. Maps and models are regularly updated with new topography, survey, precipitation, runoff, and other data as development occurs in and around floodplains and the watershed. One should anticipate that the BFEs will increase in the future due to a number of conditions. Cities and counties that require future conditions in the evaluation and

modeling of proposed projects and seek to minimize the allowable increases in water surface elevations will reduce future flood hazard to new and existing developments.

6. Compensatory flood storage

Another higher standard that can be implemented today that will limit future flood hazard exposure is maintaining valley storage, which is also referred to as prohibiting fill without equivalent, compensatory excavation.

Maintaining valley storage aids in maintaining “no rise” in water surface elevations. Reducing valley storage in rivers or streams tends to increase downstream flooding. Currently, a property within the floodplain holds a certain volume of water during a flood event. After the proposed project is completed, the property must still hold the same volume of floodwater. The shape may be different, but the volume remains the same.

Maintaining valley storage allows a property owner to move dirt around on the property, while still containing the volume of floodwaters prior to the earthwork activity. If the existing soil is not suitable for construction, then soil can be replaced with appropriate soils. Typically, this is a one-to-one match meaning that for every amount of dirt brought into the floodplain, an equal amount of dirt is removed. Some communities, however, may have differing requirements on the amount of material removed and replaced.

Consider conditional approval of recommended floodplain management practices for inclusion in 2028 Flood Plan

Chapter 5

Task 5B - FMEs for TWDB to Perform

Statewide Definitions for "Small/Rural"

Region	City	County
TWDB FIF FIUP	• **Pop < 10k *–or-*** • **Located in a rural county**	• **Urban area pop < 50k**
4 – Sabine	• Pop ≤ 10k *–or-* • Located in a county w/o urban center	• Urban area pop ≤ 50k
8 – Lower Brazos	• Pop ≤ 10k *–or-* • Located in a rural county	• No incorporated municipality with pop > 50k *–or-* • Unincorporated pop < 50k
9 – Upper Colorado	• Pop ≤ 10k *–or-* • Located in a rural county	• No urban center with pop > 50k *–or-* • Project benefits a rural area
12 – San Antonio	• Pop ≤ 10k *–or-* • Located in a county with urban area pop ≤ 50k	• No urban center w/ pop > 100k *–or-* • Project benefits a rural area *–or-* • Applicant can demonstrate to the board that they are rural

Consider approval of “small/rural” definition for Trinity Region in the 2028 Flood Plan

FMEs for TWDB to Perform

Rank	FME ID	FME Name	FME Sponsor
1	03-51-0000000516	Kaufman County Countywide Drainage Study - Phase 2	Kaufman County
2	03-51-0000000153	Liberty County Re-canalization	Liberty County
3	03-51-0000000085	Leon County DMP	Leon County
4	03-51-0000000467	Floodplain Evaluation of Kings Branch and Farmers Branch	Westworth Village
5	03-51-0000000081	Freestone County DMP	Freestone County, Fairfield, Streetman, Teague, Wortham
6	03-51-0000000148	Houston County dike for critical facilities	Houston County
7	03-51-0000000078	Anderson County DMP	Anderson County
8	03-51-0000000079	Cooke County DMP	Cooke County
9	03-51-0000000082	Houston County DMP	Houston County
10.5	**03-51-0000000089**	**Polk County DMP**	**Polk County, Livingston, Goodrich, Onalaska, Seven Oaks, Corrigan**
10.5	**03-51-0000000157**	**Polk County Road and Drainage Improvements**	**Polk County**

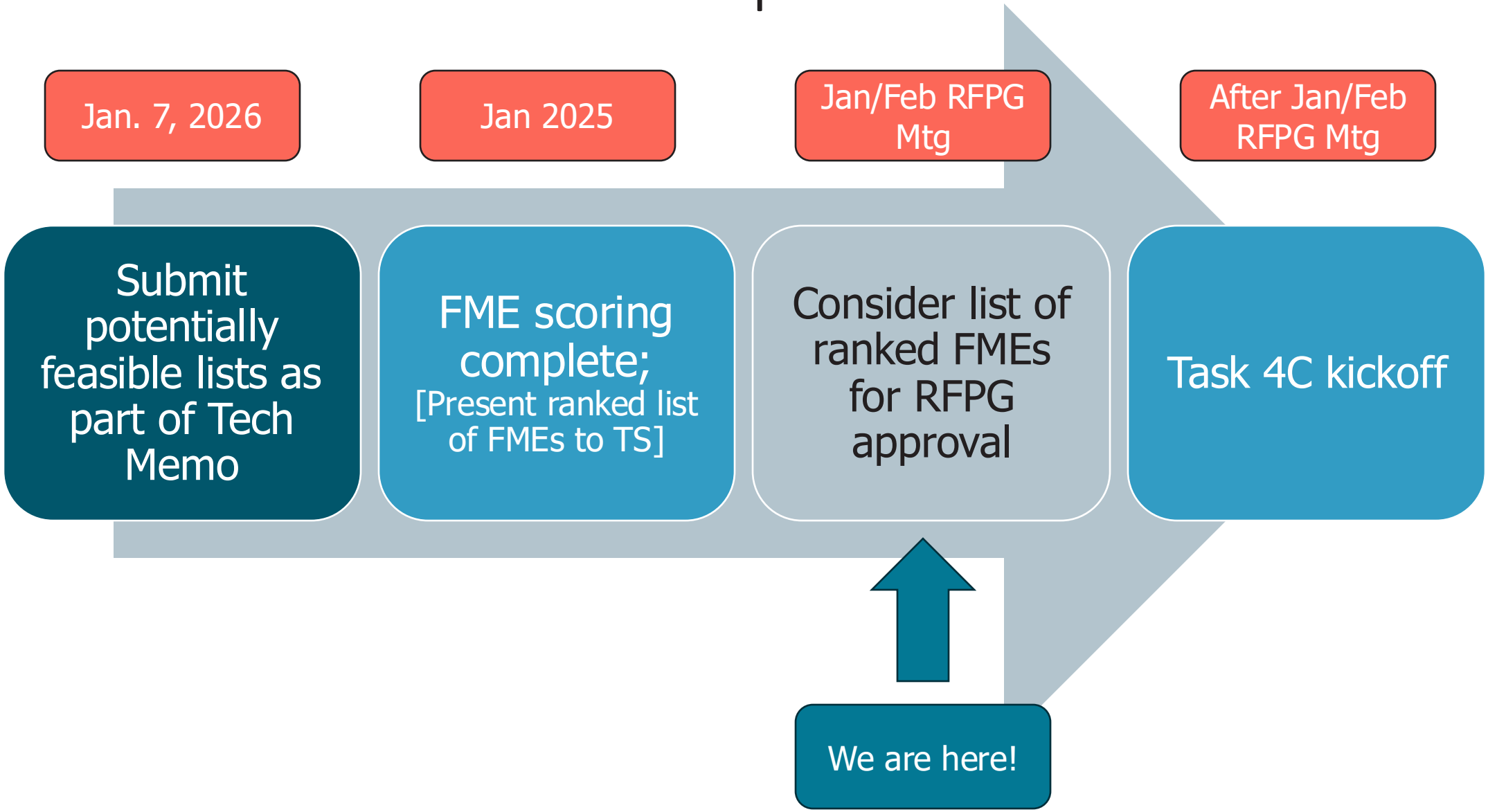
Consider approval of FMEs for TWDB to perform for inclusion in 2028 Flood Plan

Chapter 4

Task 4A Potentially Feasible FMEs, FMPs and FMSs

Task 4C FME to FMP Conversions

Task 4A and 4C – Next Steps



FMEs for RFPG to Perform

Rank	FME ID	FME Name	FME Sponsor
1	03-51-0000000528	Upper Trinity Basin Nature-Based Solutions (NBS) Project Identification and Prioritization	North Central Texas Council of Governments
2	03-51-0000000517	Phase #2 of Stormwater Master Plan	Denton
3	03-51-0000000519	Mill Creek Drainage Relief System - Upper-Middle Improvements	Dallas
	~~03-51-0000000516~~	~~Kaufman County Countywide Drainage Study - Phase 2~~	~~Kaufman County~~
	~~03-51-0000000153~~	~~Liberty County Re-canalization~~	~~Liberty County~~
4	03-51-0000000376	Project 14 – Ridgeway Circle and Ridgeway Drive System	Richardson
5	03-51-0000000554	Ellis County Drainage Master Plan	Ellis County
	~~03-51-0000000467~~	~~Floodplain Evaluation of Kings Branch and Farmers Branch~~	~~Westworth Village~~
6	03-51-0000000426	Woody Branch Floodplain Management Study	Dallas
	~~03-51-0000000358~~	~~City of Irving DMP~~	~~Irving~~
7	03-51-0000000461	Cooper Creek Drainage Study	Denton
8	03-51-0000000434	Coombs Creek Bridge @ Colorado	Dallas
9	03-51-0000000428	Lower Five Mile Creek Management Plan	Dallas

Repeats from TWDB List

Project has been initiated.

Consider approval of FMEs for RFPG Technical Consultant to perform for inclusion in 2028 Flood Plan

Chapter 8 Administrative, Regulatory & Legislative Discussion

Potential Ideas for Future Cycles

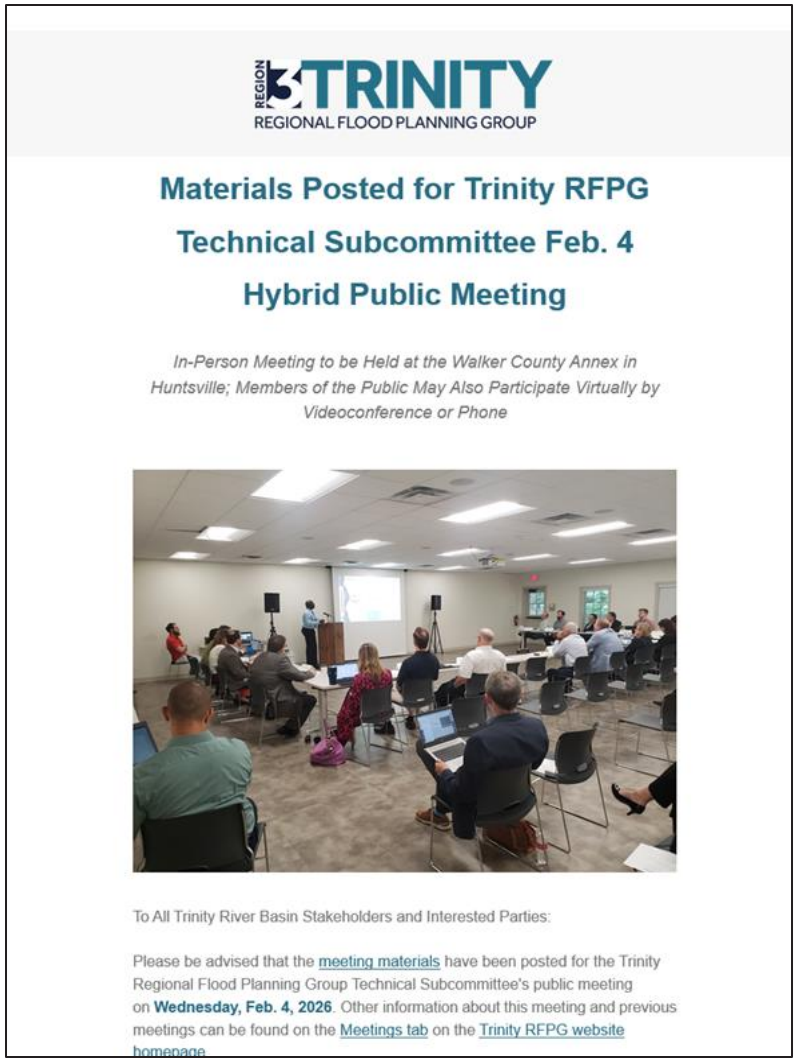
- Administrative & Regulatory
- Funding Opportunities
- Legislative
- Other

Administrative Ideas to Date

- Budget allocation formula review should consider amount of available data, region size (acreage), population of region.
- Exhibits C and D should be provided with scopes of work.
- Clarification that floodplain management practices does not having to be “all or nothing”.
- Acknowledgment of FMXs accomplished outside the regional flood plan and/or Flood Infrastructure Fund

Chapter 10 Outreach Update

Public Outreach & Engagement



REGION 3 TRINITY
REGIONAL FLOOD PLANNING GROUP

Materials Posted for Trinity RFPG Technical Subcommittee Feb. 4 Hybrid Public Meeting

In-Person Meeting to be Held at the Walker County Annex in Huntsville; Members of the Public May Also Participate Virtually by Videoconference or Phone

To All Trinity River Basin Stakeholders and Interested Parties:

Please be advised that the meeting materials have been posted for the Trinity Regional Flood Planning Group Technical Subcommittee's public meeting on **Wednesday, Feb. 4, 2026**. Other information about this meeting and previous meetings can be found on the Meetings tab on the Trinity RFPG website homepage.

- Stakeholder Outreach
  - Updated stakeholder contact list
  - Sent stakeholder notifications for the following:
    - Posting of meeting agenda and meeting materials for Jan. 20 Technical Subcommittee Meeting
    - Posting of meeting agenda and meeting materials for Feb. 4 Technical Subcommittee meeting
    - Posting of meeting agenda and meeting materials to the Trinity RFPG website ahead of Feb. 26 public meeting

Public Outreach & Engagement

- Media Outreach
  - Updated media list of more than 100 key media contacts throughout the Upper, Middle and Lower Trinity
  - Coordinated interview, photos for Rambler Texas Media coverage
  - Drafted and distributed media advisory ahead of Feb. 26 public meeting

Rambler
TEXAS MEDIA

Texas refines its approach to flood planning

by Zach Freeman

February 06, 2026

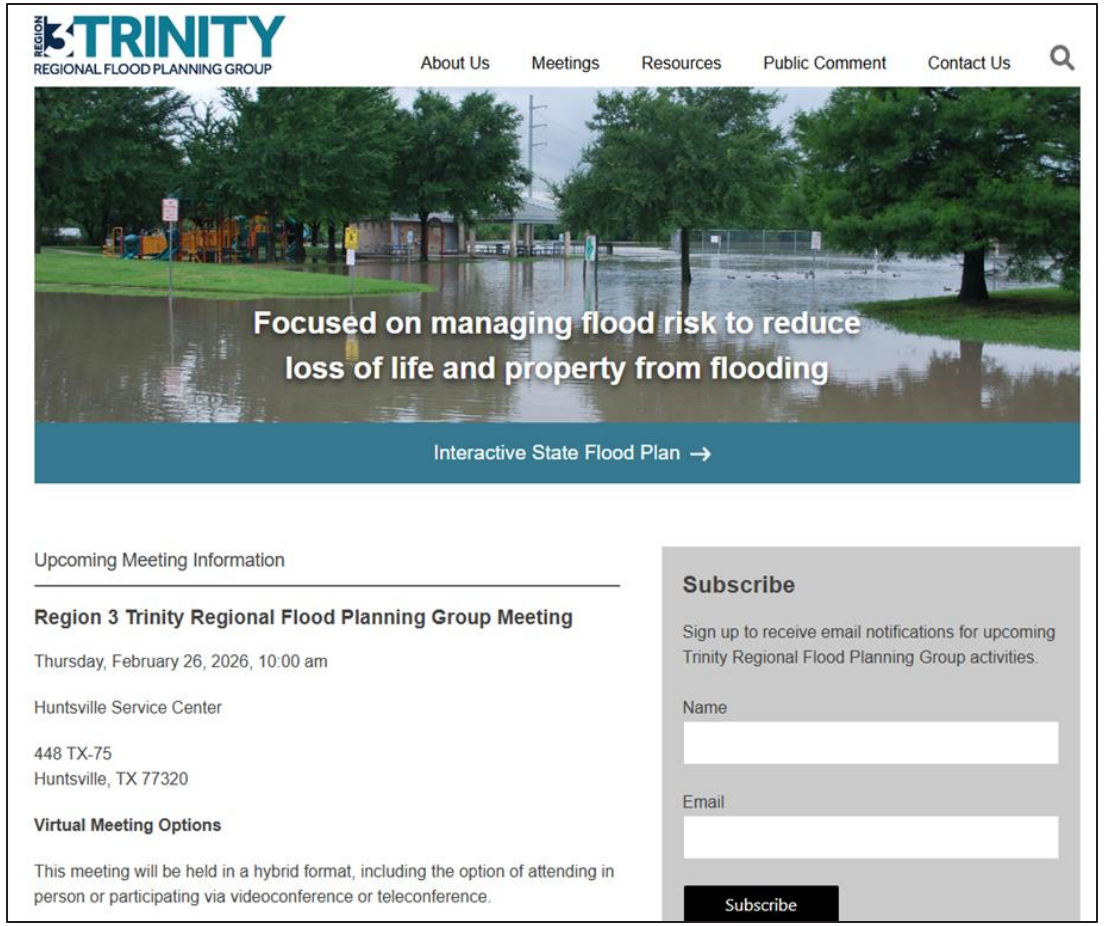
The focus of the second regional flood plan is on increasing detail, adaptability and data quality. /Photo provided by Owen Ramsey

Dallas County—When disaster strikes, planning can mean the difference between recovery and catastrophe.

Communities across Texas are working to strengthen regional connectivity and improve flood response as part of the state's second-ever regional flood plan, an effort designed to coordinate resources, unify response strategies and better protect residents from future flooding.

The statewide framework divides Texas into 15 river basin regions, bringing together cities, counties, water authorities and emergency management agencies under a coordinated planning structure. The goal is to align flood preparedness efforts that were once fragmented and allow disaster response plans to function more effectively together.

Public Outreach & Engagement



- Website and Social Media
  - Updated meeting information on website, LinkedIn and X for recent Trinity RFPG meetings
  - Updated meeting information on website, Linked In, and X for Technical Subcommittee meetings
  - Posted meeting agenda and materials for Feb. 26 public meeting to website, Linked In, and X
  - Assisted with drafting response to Sand Branch email inquiry

LOOK-AHEAD

March 26, 2026

- Consultant sends list of FMEs for TWDB to perform to TWDB & supporting documentation

May 2026

- Update on FMEs for RFPG to perform (Task 4C)
- Update on FMEs for TWDB to perform (Task 5B)
- Introduction to Impact of the Plan (Task 6)
- Introduction to Emergency Response (Task 7)
- Introduction to Financing Analysis (Task 9)

Between May-August 2026

- Technical Subcommittee to approve recommended FMXs individually

August 2026

- Update on FMEs that RFPG is performing (Task 4C)
- Approve FMXs to recommend for inclusion in the 2028 Plan (Task 5A)
- Update on FMEs that TWDB is performing (Task 5B)
- Update on Impact of the Plan (Task 6)
- Update on Emergency Response (Task 7)
- Update on Financing Analysis (Task 9)
- Introduction to Plan Implementation (Task 11)

November 2026

- Present Impacts of the Plan (Task 6)
- Present Emergency Response (Task 7)
- Present Financing Analysis (Task 9)

Notes: indicates target date.

Yellow highlight indicates hard deadline.

Nature-Based Solutions

for Flood Resilience

Nature-Based Solutions for Flood Resilience

Region 3 Trinity Regional Flood Planning Group

Texas Water Development Board

Freese and Nichols, Inc.

The Nature Conservancy

Agenda

- Purpose of the NBS for Flood Resilience Guidance Manual
- Definition and Examples of NBS for Flood Resilience
- Publishing Schedule
- Guidance Manual Content
- How to Promote NBS through Regional Flood Planning
- Key Takeaways

TEXAS WATER DEVELOPMENT BOARD

NBS in the State Flood Plan

FMP Type	Recommended FMP Count
Low Water Crossing or Bridge Improvement	94
Infrastructure	148
Regional Detention Ponds	73
Regional Channel Improvements	79
Storm Drain Improvements	47
Dam Improvements, Maintenance, and Repair	5
Flood Walls and Levees	4
Coastal Protections	1
Nature-Based Solutions	**8**
Comprehensive Regional Projects	83
Property or Easement Acquisition	13
Elevation of Individual Structures	4
Flood Readiness and Resilience	53
Other	3
Total	**615**

TEXAS WATER DEVELOPMENT BOARD

Project Goals

01

Synthesize Research & **Guidance** on the use of NBS for Flood Mitigation into a **Single**, **Statewide Manual** for Texas Communities

02

Provide **Strategies & Tools** to Address Common **Barriers & Challenges**

03

Support The Implementation Of NBS Into The **Regional Flood Planning Process & Community-Driven Efforts**

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Intended Users

- Local government officials or representatives charged with planning, developing, or managing community infrastructure or assets
  - City Engineers
  - Floodplain Managers
  - Planners
  - Regional Flood Planning Group (RFPG)
- Practitioners
- Developers

City Engineer CIP Planning (Master Drainage Plans/Studies, Preliminary Engineering, etc.)

RFPG & Technical Consultant Teams Project alternative identification

Floodplain Administrator Example floodplain regulation, polices and incentives for more flood resilient community (e.g. floodplain buffers/setbacks)

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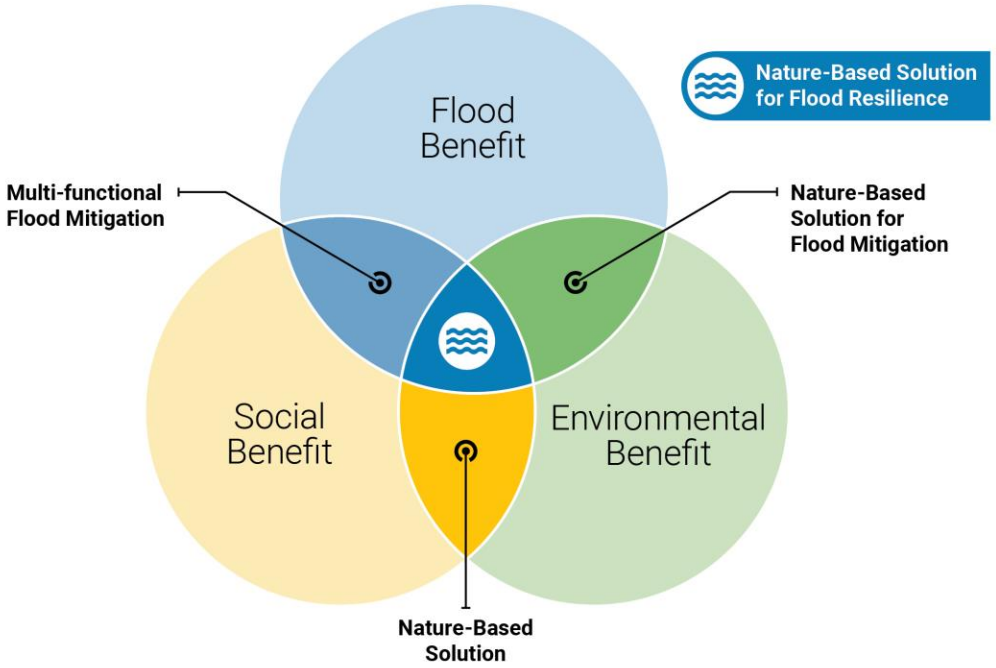
Defining Nature-Based Solutions (NBS)

NBS use or imitate natural features and/or processes to increase resilience while providing sustainable benefits to people and the environment.



Co-benefits Examples:

- Water Supply and Drought Mitigation
- Water Quality and Public Health
- Urban Heat Reduction and Air Quality
- Recreation and Social Assets

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NBS for Flood Resilience Spectrum

Traditional (Gray)	Hybrid	Natural
Hard, gray, engineered structures built to address development and flood risk reduction objectives	Combination of hard engineering solutions incorporated with natural and nature-based features to accomplish flood risk reduction objectives	Creation, protection, or restoration of natural systems or processes to accomplish flood risk reduction objectives

Adapted from the International Guidelines on Natural and Nature Based Features for Flood Risk Management

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NBS for Flood Resilience Examples

Stream and Floodplain Restoration

Wet Pond with Constructed Wetlands

Structural NBS for Flood Resilience

Watershed

- Stream Restoration
- Floodplain Restoration
- Levee Setback
- Wetland Restoration
- Playa Lake Restoration

Neighborhood

- Bioretention
- Vegetated Swale
- Permeable Pavement
- Vegetative Filter Strips
- Wet Ponds
- Constructed Wetlands
- Tree Trenches
- Rainwater Harvesting
- Stormwater Parks

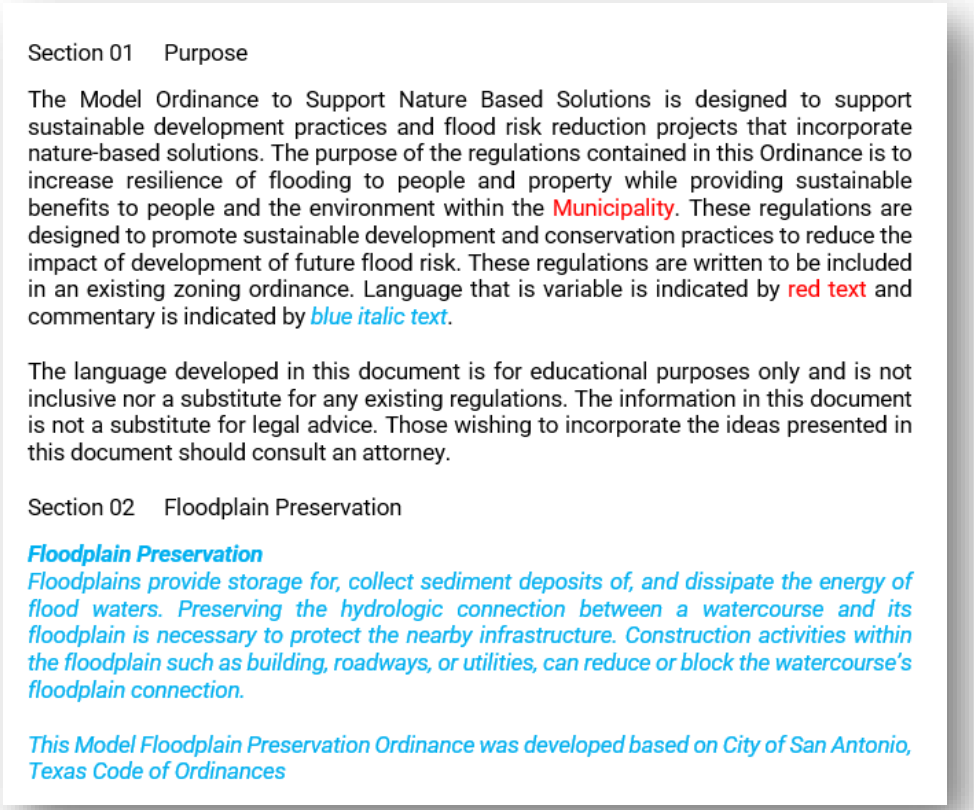
Coastal

- Beach Nourishment and Dune Restoration
- Coastal Marsh, Seagrass, and Prairie Restoration
- Natural Breakwaters and Oyster Reefs
- Waterfront Parks

Non-Structural NBS for Flood Resilience

- Property Acquisition and Conservation
- Regulating Development in Floodplains
- Promoting Native Vegetation in Design Criteria

Model Ordinance



Section 01 Purpose

The Model Ordinance to Support Nature Based Solutions is designed to support sustainable development practices and flood risk reduction projects that incorporate nature-based solutions. The purpose of the regulations contained in this Ordinance is to increase resilience of flooding to people and property while providing sustainable benefits to people and the environment within the Municipality. These regulations are designed to promote sustainable development and conservation practices to reduce the impact of development of future flood risk. These regulations are written to be included in an existing zoning ordinance. Language that is variable is indicated by red text and commentary is indicated by *blue italic text*.

The language developed in this document is for educational purposes only and is not inclusive nor a substitute for any existing regulations. The information in this document is not a substitute for legal advice. Those wishing to incorporate the ideas presented in this document should consult an attorney.

Section 02 Floodplain Preservation

Floodplain Preservation
Floodplains provide storage for, collect sediment deposits of, and dissipate the energy of flood waters. Preserving the hydrologic connection between a watercourse and its floodplain is necessary to protect the nearby infrastructure. Construction activities within the floodplain such as building, roadways, or utilities, can reduce or block the watercourse's floodplain connection.

This Model Floodplain Preservation Ordinance was developed based on City of San Antonio, Texas Code of Ordinances

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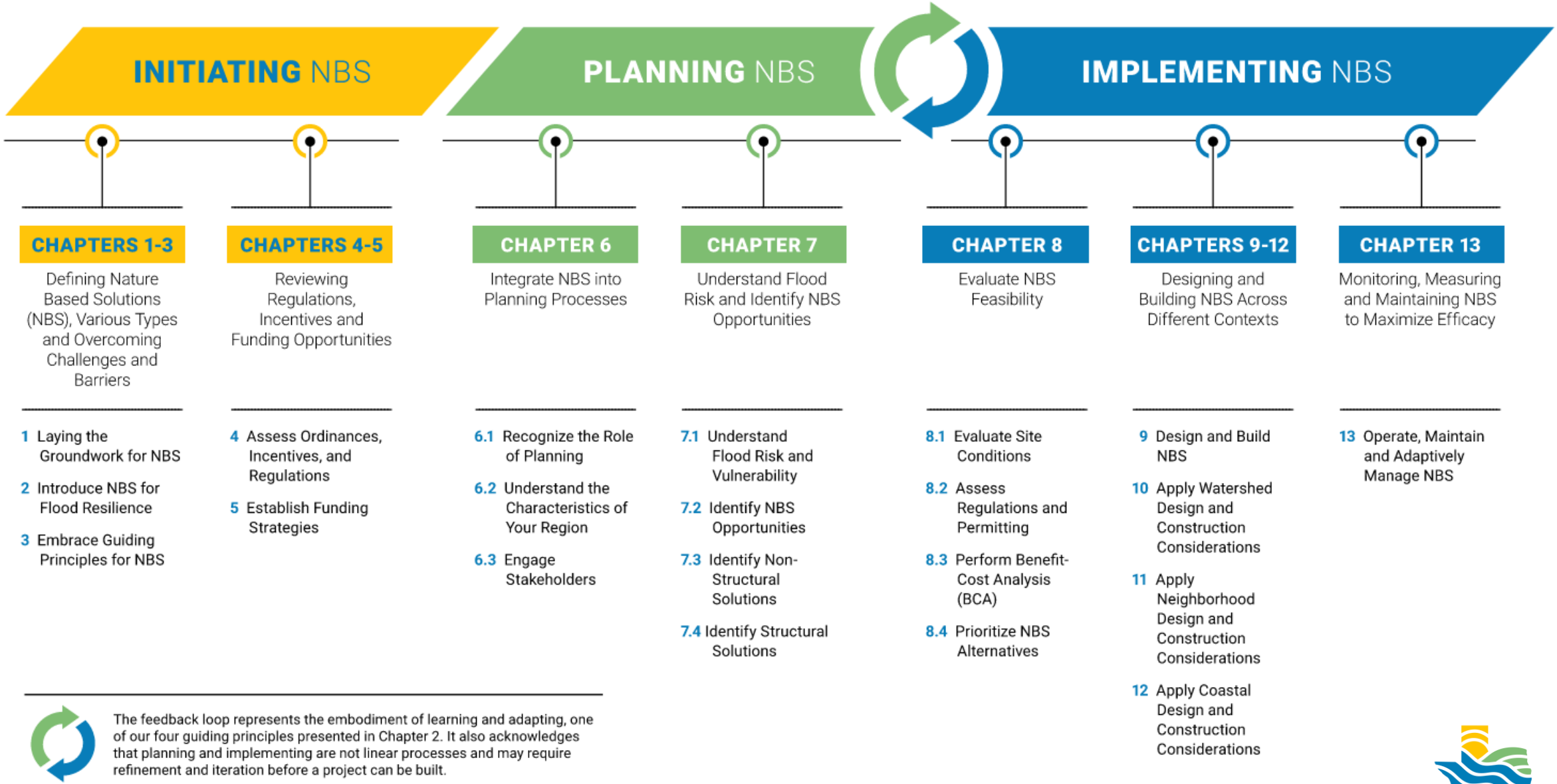
NBS Guidance Manual Schedule

- **Spring 2026** Draft Guidance Manual for Public Comment
- **Summer 2026** Final Guidance Manual Published
- https://www.twdb.texas.gov/flood/research/Nature-based-Solutions-2022/index.asp

TEXAS WATER DEVELOPMENT BOARD



TEXAS WATER DEVELOPMENT BOARD

Promote NBS through Regional Flood Planning

Task 3	Task 4A	Task 4C	Task 5A
• Set goal for NBS implementation • Recommend NBS floodplain management practices	• **Discuss NBS opportunities with local sponsors** • Identify potential FMPs and FMSs	• Consider potential for co-benefits when selecting FMEs to evaluate • **Develop NBS alternatives while performing FMEs**	• Document project benefits, % NBS by cost • Include ecosystem services, co-benefits in project BCAs
NBS Guidance Manual Resource	**NBS Guidance Manual Resource**	**NBS Guidance Manual Resource**	**NBS Guidance Manual Resource**
• Guiding Principles • Example NBS floodplain management practices • Model Ordinance for NBS	• How to: developing a proactive stakeholder engagement strategy • How to: identify structural and non-structural NBS • Matrix of flood mitigation, environmental, and social benefits by NBS type	• Example alternative prioritization approach • Matrix of site suitability characteristics by NBS type • One Pager by NBS Type	• How to: calculate expected flood damages • Monetary value of ecosystem services • Conceptual BCA for NBS

Key FMP Criteria to Capture for NBS

- Nature-Based Solution (% by cost)
  - *Engineering Judgement*
- Other/Multiple Benefits

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Key Takeaways – NBS for Flood Resilience

- Have more co-benefits than mono-functional flood infrastructure
- Should be considered in planning phase, before design begins
- Offer additional funding opportunities

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Questions?

Shena Providence, EIT, CFM | Shena.Providence@freese.com

Justin Kozak, PhD, CFM | Justin.Kozak@tnc.org

8. Updates from adjoining coastal regions

9. Updates from Planning Group Sponsor

10. Receive registered general public comments

Limit 3 minutes per person

11. Announcements

12. Consider meeting date for next meeting

Determined during Look-Ahead discussion.

13. Adjourn